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| APPLICATION NO.   | FILING DATE | FIRST NAMED INVENTOR   | ATTORNEY DOCKET NO.         | CONFIRMATION NO. |
|---|-------------|------------------------|-----------------------------|------------------|
| 10/646,774  | 08/25/2003  | Marc Kenneth Boysworth | 0918.0220C                  | 1091             |
| 27896   | 7590        | 05/16/2005             |                             |                  |
| EDELL, SHAPIRO & FINNAN, LLC<br>1901 RESEARCH BOULEVARD<br>SUITE 400<br>ROCKVILLE, MD 20850 |             |                        | EXAMINER<br>TSAI, CAROL S W |                  |
|   |             |                        | ART UNIT<br>2857            | PAPER NUMBER     |

DATE MAILED: 05/16/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

10/646,774

Applicant(s)

BOYSWORTH, MARC KENNETH

Examiner

Carol S. Tsai

Art Unit

2857

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 22 March 2005.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-50 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-4, 8-23, 27-40, 42-47, 49, and 50 is/are rejected.
- 7) ☒ Claim(s) 5-7, 24-26, 41 and 48 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 25 August 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

### DETAILED ACTION

1. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

#### *Claim Rejections - 35 USC § 102*

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) and the Intellectual Property and High Technology Technical Amendments Act of 2002 do not apply when the reference is a U.S. patent resulting directly or indirectly from an international application filed before November 29, 2000. Therefore, the prior art date of the reference is determined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

3. Claims 1-3, 13, 15, 20-22, 32, 34, 39, 40, 43, 46, 47, and 50 are rejected under 35 U.S.C. 102(e) as being anticipated by U. S. Publication 2003/0018450 to Carley.

With respect to claims 1-3, 13, 20-22, 32, 39, 40, 46, and 47, Carley discloses a program product apparatus having a computer readable medium with computer program logic recorded thereon for analyzing a set of values, said program product apparatus comprising: (a) a windowing module that defines a plurality of subsets of contiguous values within the set of

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values (see Fig. 3); (b) an analysis module that determines a measure of variation among contiguous values in each of the plurality of subsets to produce a plurality of measures of variation corresponding to the plurality of subsets (see col. 4, line 38 to col. 5, line 30 and col. 6, lines 7-65); and (c) an assessment module that categorizes the set of values based upon an analysis of the plurality of measures of variation (see col. 11, line 56 to col. 12, line 17).

As to claims 15, 34, 43, and 50, Carley also categorizing the set of values based upon a difference between a measure of variation determined for one of the plurality of subsets and a measure of variation determined for another one of the plurality of subsets (see col. 7, line 66 to col. 8, line 7).

### *Claim Rejections - 35 USC § 103*

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 4, 8, 23, 27, 42, and 49 are rejected under 35 U.S.C. 103(a) as being unpatentable over Carley in view of U. S. Patent No. 6,625,569 to James et al.

As noted above, with respect to claims 4 and 23, Carley disclose the claimed invention, except for the measurement values being values measured from one of an observed substance and an observed event.

James et al. teach the measurement values being values measured from one of an observed substance and an observed event (see col. 3, lines 46-49 and col. 12, lines 58-62).

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It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify Carley's method to include the measurement values being values measured from one of an observed substance and an observed event, as taught by James et al., in order that the observed sensor readings can be compared to those predicted by a model.

As to claims 8, 27, 42, and 49, Carley does not disclose the set of values being characterized as one of homoscedastic and heteroscedastic.

James et al. teach the set of values being characterized as one of homoscedastic and heteroscedastic (see col. 30, lines 17-36).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify Carley's method to include the set of values being characterized as one of homoscedastic and heteroscedastic, as taught by James et al., in order to differentiate between normal noise and anomalous sensor values.

6. Claims 9-12, 14, 28-31, and 33 are rejected under 35 U.S.C. 103(a) as being unpatentable over Carley in view of 4,845,500 to Cornett et al.

As noted above, with respect to claims 9-12 and 28-31, Carley discloses the claimed invention, except for defining a range of values not greater than a number of values within the set of values; and defining a subset of values by positioning the range at a specific position within the set of values.

Cornett et al. teach defining a range of values not greater than a number of values within the set of values; and defining a subset of values by positioning the range at a specific position within the set of values (see col. 2, lines 32-49).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify Carley's method to include defining a range of values not greater than a number of values within the set of values; and defining a subset of values by positioning the range at a specific position within the set of values, as taught by Cornett et al., in order to adjust the target window in accordance with target size and weighting the cells within the window (see Abstract, lines 9-11).

As to claims 14 and 33, Carley does not disclose storing a determined measure of variation in association with a size of the range and a position of the range associated with the subset for which the measure of variation was determined.

Cornett et al. teach storing a determined measure of variation in association with a size of the range and a position of the range associated with the subset for which the measure of variation was determined (see col. 2, lines 50-64).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify Carley's method to include storing a determined measure of variation in association with a size of the range and a position of the range associated with the subset for which the measure of variation was determined, as taught by Cornett et al., in order to establish a new stored amplitude for each cell with significantly reduced background noise and clutter (see col. 2, lines 62-64).

7. Claims 16, 35, and 44 are rejected under 35 U.S.C. 103(a) as being unpatentable over Carley in view of Wilkes et al.

As noted above, with respect to claims 16, 35, and 44, Carley discloses the claimed

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invention, except for categorizing the set of values based upon n-way principal component analysis of the measures of variation determined for the plurality of subsets.

Wilkes et al. teach categorizing the set of values based upon n-way principal component analysis of the measures of variation determined for the plurality of subsets (see paragraph 0031).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify Carley's method to include categorizing the set of values based upon n-way principal component analysis of the measures of variation determined for the plurality of subsets, as taught by Wilkes et al., in order to represent the variation to variation present in many variables using a small number of factors.

8. Claims 17-19, 36-38, and 45 are rejected under 35 U.S.C. 103(a) as being unpatentable over Carley in view of U. S. Publication 2003/0171896 to Rao et al.

As noted above, with respect to claims 17-19, 36-38, and 45, Carley discloses the claimed invention, except for categorizing the set of values based upon visual analysis of a plot of the measures of variation determined for the plurality of subsets.

Rao et al. teach categorizing the set of values based upon visual analysis of a plot of the measures of variation determined for the plurality of subsets (see Figs. 4, 6, 8, and 10-21).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify Carley's method to include categorizing the set of values based upon visual analysis of a plot of the measures of variation determined for the plurality of

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subsets., as taught by Rao et al., in order that measures of variation can be displayed for further analysis.

*Allowable Subject Matter*

9. Claims 5-7, 24-26, 41, and 48 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

*Response to Arguments*

10. Applicant's arguments with respect to claims 1-4, 8-23, 27-40, 42-47, and 48-50 have been considered but are moot in view of the new ground(s) of rejection.

*Conclusion*

11. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event,



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however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

*Contact Information*

12. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Carol S. W. Tsai whose telephone number is (571) 272-2224.

The examiner can normally be reached on Monday-Friday from 8:30 AM to 5:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Marc S. Hoff can be reached on (571) 272-2216. The fax number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 886-217-9197 (toll-free).



Carol S. W. Tsai  
Primary Examiner  
Art Unit 2857

cswt  
May 12, 2005